# SOUTH ESSEX SEWERAGE DISTRICT INDUSTRIAL PRETREATMENT PROGRAM

#### <u>2020</u>

#### ANNUAL REPORT

TO THE

U.S. ENVIRONMENTAL PROTECTION AGENCY

AND THE

**MASSACHUSETTS** 

DEPARTMENT OF ENVIRONMENTAL PROTECTION

### TABLE OF CONTENTS

Section ii	Introduction	p. 3
Section 1	Updated Lists of Significant Industrial Users 1.1 Changes to the list of Significant Industrial Users (SIUs) 1.2 Applicable Limits	pp. 4-15
Section 2	A Summary of Compliance and Enforcement Activities	pp. 15-17
	<ul> <li>2.1 SIUs Inspected by SESD</li> <li>2.2 Industries Sampled</li> <li>2.3 Summary of Compliance Schedules</li> <li>2.4 pH Monitoring</li> <li>2.5 Summary of Written Notices of Violation (NOVs)</li> <li>2.6 Administrative Meetings, Administrative Orders and Penalties Collected</li> </ul>	
Section 3	Summary of Significant Noncompliance (SNC)	pp. 18-21
Section 4	Narrative Description of Program Effectiveness 4.1 Inspections and permits 4.2 Equipment purchased and utilized 4.3 Training, reference material and staffing 4.4 Proposed changes to the program	pp. 22-23
Section 5	Testing of the Influent, Effluent and Additional Testing to Detect Interference and Pass-through	p. 23-24
Sections 6,	7, 8 & 9 Description of Interference & Pass- through information	p. 24
Section 10	Status of Local Limits	p. 24
Attachmen	<ol> <li>A - Section 5 Supporting Documentation</li> <li>Metals Testing</li> <li>Ammonia, TKN, nitrate and CN testing</li> <li>TCLP sludge testing.</li> <li>Toxicity testing</li> </ol>	

Attachment B - 2020 EPA Region 1 Annual Pretreatment Report Summary Sheet

#### **SECTION ii**

#### **INTRODUCTION**

This Report is submitted by the South Essex Sewerage District (District) to the United States Environmental Protection Agency and the Massachusetts Department of Environmental Protection, Division of Water Pollution Control Regulatory Branch in accordance with the requirements of Part 1.B.3. of the District's NPDES Permit No. MA 0100501 signed May 5, 2016 (the NPDES permit) and of 40 CFR 403.12 (i). The section headings below generally follow the numbering system set forth in the District's NPDES permit.

#### SECTION 1 UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS

KEY:

N/A ....Not Applicable

(1/5) ....One violation for a particular pollutant out of five tests for that pollutant in the

calendar year (Violation/Tests).

....Since the pH violations, if any, are listed in section 2.4 below, the SIU list does not contain pH violations.

1. Company Name: Walbar Peabody LLC

Address: 8 Fifth Street

Peabody, MA 01960

Authorized Representative: Mr. Stephen Mahoney, Facility Manager

Telephone: 978-977-6758

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(New Source)

SIC Code: 3479, 3724 Permit # 40026

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

v. Local Limits: Consistent Compliance

2. Company Name: Walbar Peabody LLC

Address: 1 Fifth Street

Peabody, MA 01960

Authorized Representative: Mr. Stephen Mahoney, Facility Manager

Telephone: 978-977-6758

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(New Source)

SIC Code: 3724 Permit # 41045

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Inconsistent Compliance

(Cu monthly 1/5)

# <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> <u>(CONTINUED)</u>

3. Company Name: <u>Excelitas Technologies Corp.</u>

Address: 35 Congress Street

Salem, MA 01970

Authorized Representative: Mr. Michael Fanti, EHS

Telephone: 978-745-3200

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(Existing Source)

SIC Code: 3671, 3677, 3641, and 3829

Permit # 50065

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

v. Local Limits: Consistent Compliance

4. Company Name: <u>Thermal Circuits, Inc.</u>

Address: One Technology Way

Salem, MA 01970

Authorized Representative: Mr. Benjamin Levie, Engineering Mgr.

Telephone: 978-745-1162

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(New Source)

SIC Code: 3699 Permit # 50128

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

# <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (CONTINUED)

5. Company Name: <u>TDF Metal Finishing Co., Inc.</u>

Address: 6 Electronics Avenue

Danvers, MA 01923

Authorized Representative: Mr. Thomas D. Ferrairo, President

Telephone: 781 - 223-4292

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(New Source)

SIC Code: 3471 Permit # 20136

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

v. Local Limits: Consistent Compliance

6. Company Name: **Delta Electronics Mfg. Corp.** 

Address: 416 Cabot Street

Beverly, MA 01915

Authorized Representative: Mr. Justin Delaney, Director of Operations

Telephone: 978-927-1060

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(Existing Source)

SIC Code: 3678 Permit # 10040

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Inconsistent Compliance

(CN daily1/9)

## <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (CONTINUED)

7. Company Name: <u>Communications & Power Industries, LLC, Beverly</u>

**Microwave Division** 

Address: 150 Sohier Road

Beverly, MA 01915

Authorized Representative: Mr Jeffrey Schlichte, Facilities Supervisor

Telephone: 978-922-6004

Categorical Classification: Subpart A- Metal Finishing Subcategory 40 CFR 433

(Existing Source)

SIC Code: 3671 Permit # 10047

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Inconsistent Compliance

(Ni daily 1/10, Ni monthly 1/5)

v. Local Limits: Consistent Compliance

8. Company Name: <u>Travel Leather Co., Inc.</u>

Address: 39 Wallis Street

Peabody, MA 01960

Authorized Representative: Mr. Steve Orgettas, President

Telephone: 978-531-5254

Categorical Classification: Subpart I- Retan-Wet Finish-Splits Subcategory 40 CFR 425

(Existing Source)

SIC Code: 3111 Permit # 40019

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Inconsistent Compliance

(Cr daily 1/12, Cr monthly 1/7)

## <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (CONTINUED)

9. Company Name: GT Crystal Systems, LLC

Address: 27 Congress Street

Salem, MA 01970

Authorized Representative: Mr. Frank Banacos, Senior Division of Sapphire Operations

Telephone: 978-619-3325

Categorical Classification: Electrical and Electronic Components Point Source Category 40

CFR Part 469 - Subpart B – Electronic Crystal Subcategory

(New Source)

SIC Code: 3679, 3999 and 8731

Permit # 50074

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

v. Local Limits: Consistent Compliance

10. Company Name: <u>Danvers Water Treatment Plant</u>

Address: Town of Danvers

30 Lake Street

Middleton, MA 01949

Authorized Representative: Mr. Jason McCarthy, Plant Manager

Telephone: 978-774-5054

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 4941 Permit # 20200

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

## <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (CONTINUED)

11. Company Name: Footprint Power Salem Harbor Development LP

Address: 24 Fort Avenue

Salem, MA 01970

Authorized Representative: Mr. Timothy Leary, Director, Asset Management

Telephone: 978-666-0784

Categorical Classification: Steam Electric Power Generating Subcategory 40 CFR Part 423

(New Source)

SIC Code: 4911 Permit # 50124

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

v. Local Limits: Consistent Compliance

12. Company Name: <u>IXYS IC Division (fka Clare, Inc.)</u>

Address: 78 Cherry Hill Drive

Beverly, MA 01915

Authorized Representative: Mr. Nestore Polce, VP of Semiconductor Operations

Telephone: 978-524-6744

Categorical Classification: Electrical and Electronic Components Point Source Category 40

CFR Part 469 Subpart A- Semiconductor Subcategory

(New Source)

SIC Code: 3674 Permit # 10084

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: Consistent Compliance

## <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (Continued)

13. Company Name: Rousselot Peabody, Inc.
Address: 227 Washington Street

Peabody, MA 01960

Authorized Representative: Mr. Ian Gunniss, Wastewater Treatment Supervisor

Telephone: 978-573-3774

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 2899 Permit # 40086

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

v. Local Limits: Inconsistent Compliance

(TSS lbs daily 7/365)

14. Company Name: <u>City of Peabody Sanitary Landfill</u>

Address: Farm Avenue

Peabody, MA 01960

Authorized Representative: Mr. Robert Labossier, Director DPS

Telephone: 978-536-7116

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 4953 Permit # 40044

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

## <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (CONTINUED)

15. Company Name: <u>Salem and Beverly Water Supply Board</u>

Address: 50 Arlington Avenue

Beverly, MA 01915

Authorized Representative: Mr. Peter Smyrnios, Superintendent

Telephone: 978-922-2600

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 4941 Permit # 10070

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

v. Local Limits: Consistent Compliance

16. Company Name: <u>Peabody Monofill Associates, Inc.</u>

Address: 40 Farm Avenue

Peabody, MA 01960

Authorized Representative: Mr. Steve Melloni, Area Residuals Manager

Telephone: 508-291-4409

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 4953 Permit # 41050

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

### <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (Continued)

17. Company Name: <u>City of Peabody, Coolidge Avenue WTP</u>

Address: 50 Coolidge Avenue

Peabody, MA 01960

Authorized Representative: Ms. Sandra Howland, Facility Supervisor

Telephone: 978-536-7116

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 4941 Permit # 41042

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

v. Local Limits: Consistent Compliance

18. Company Name: City of Peabody, Winona WTP

Address: 38 Butternut Avenue

Peabody, MA 01960

Authorized Representative: Mr. Davis Scribner, Supervisor

Telephone: 978-536-7116

Categorical Classification: NOT APPLICABLE - Significant by virtue of flow and load

magnitude.

SIC Code: 4941 Permit # 41031

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

### <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (Continued)

19. Company Name: Fresh Advantage Foods, Inc.

Address: 18 Electronics Avenue

Danvers, MA 01923

Authorized Representative: Mr. Nick Katsos, Maintenance & Facility Manager

Telephone: 781-241-3029

Categorical Classification: Meat and Poultry Products Point Source Category 40 CFR Part 432

Subpart G- Sausage and Luncheon Meat Processors (New Source)

SIC Code: 2013 Permit # 20230

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

v. Local Limits: Consistent Compliance

20. Company Name: <u>Tropical Products, Inc.</u>

Address: 220 Highland Avenue

Salem, MA 01970

Authorized Representative: Mr. Ed Berman, President

Telephone: 978-740-5665

Categorical Classification: Soap and Detergent Manufacturing Point Source Category 40 CFR

Part 417 Subpart H – Manufacture of Liquid Soaps Subcategory,

Subpart P – Manufacture of Liquid Detergents Subcategory

(New Source)

SIC Code: 2841, 2844

Permit # 50138

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: Consistent Compliance

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

### <u>UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS</u> (Continued)

21. Company Name: DiLuigi Foods

Address: 41 Popes Lane

Danvers, MA 01923

Authorized Representative: Ms. Elizabeth Munoz, HR Manager

Telephone: 978-750-9900

Categorical Classification: Meat and Poultry Products Point Source Category 40 CFR Part 432

Subpart G – Sausage and Luncheon Meat Processor (New Source)

SIC Code: 2013 Permit # 20240

i. Baseline Monitoring Reporting Requirements: N/A

ii. Compliance Status Reporting Requirements: N/A

iii. Periodic Monitoring Requirements: Consistent Compliance

iv. Categorical Limits: N/A

v. Local Limits: Consistent Compliance

#### 1.1 Changes to the List of Significant Industrial Users (SIUs)

The list in Section 1 represents the Significant Industrial Users of the South Essex Sewerage District during calendar year 2020. The information provided is as required by Attachment D, Item 1, of the District's NPDES permit.

The list is identical to last year's list.

#### **1.2 Applicable Limits**

The determination of which limits (local vs. categorical) apply to each industry is made in accordance with the following:

- 1.2.1 Metal finishing industries (Walbar Peabody, LLC 8 and 1 Fifth Street; Excelitas Technologies Corp.; Thermal Circuits, Inc.; Delta Electronics Mfg. Co.; Communications & Power Industries, Inc., Beverly Microwave Division and TDF Metal Finishing Co., Inc.) have daily local limits for total suspended solids, fats oils & grease (FOG), biochemical oxygen demand (BOD) and flow and categorical daily limits for cadmium, chromium, copper, lead, nickel, zinc, cyanide, silver and total toxic organics.
- 1.2.2 Leather industries (Travel Leather Co., Inc.) have local limits for all pollutants except categorical limits for daily chromium and upper pH.

- 1.2.3 Electrical and Electronic Components industries (IXYS IC Division) have local limits for all pollutants except a categorical limit for total toxic organics.
- 1.2.4 Meat and Poultry industries have local limits for all pollutants.
- 1.2.5 Soap and Detergent Manufacturing industry has local limits for all pollutants.
- 1.2.6 Steam Electric Power Generation industry has local limits for all pollutants.
- 1.2.7 Categorical industries that discharge less than 100gpd of industrial wastewater to the sewer (GT Crystal Systems) are determined to be Non-Significant Categorical Industrial Users. These industries are required to submit an annual certification statement in lieu of testing.
- 1.2.8 Industries that are not categorical have local limits.
- 1.2.9 Biochemical oxygen demand (BOD), fats oils & grease (FOG), total suspended solid (TSS) and flow limits are all local limits.

#### SECTION 2 A SUMMARY OF COMPLIANCE AND ENFORCEMENT ACTIVITIES DURING 2020

#### 2.1 SIU Inspections for 2020

			Address		Per	 rmit	Last Inspection
#	Industry Name	#	Street	City/Town	Class	#	Date
1	Walbar Peabody, LLC (40026)	8	Fifth Street	Peabody	2	40026	10/15/20
2	Walbar Peabody, LLC (41045)	1	Fifth Street	Peabody	2	41045	10/15/20
3	Excelitas Technologies, Inc.	35	Congress Street	Salem	2	50064	11/10/20
4	Thermal Circuits, Inc.	1	Technology Way	Salem	2	50128	02/19/20
5	TDF Metal Finishing	6	Electronics Ave	Danvers	2	20136	07/28/20
6	Delta Electronics Mfg., Co., Inc.	416	Cabot Street	Beverly	2	10040	01/31/20
7	Communications & Power Industries, Inc.	150	Sohier Road	Beverly	2	10047	05/22/20
8	Travel Leather Co., Inc.	39	Wallis Street	Peabody	2	40019	09/25/20
9	GT Crystal Systems, Inc.	27	Congress Street	Salem	2	50074	07/30/20
10	Danvers Water Treatment Plant	30	Lake Street	Middleton	2	20200	11/13/20
11	Footprint Power Salem Harbor Operations, LLC	24	Fort Avenue	Salem	2	50137	10/01/20
12	IXYS IC Division (fka Clare, Inc.)	78	Cherry Hill Drive	Beverly	2	10084	08/12/20
13	Rousselot Peabody, Inc.	227	Washington St.	Peabody	2	40086	02/25/20
14	City of Peabody - Sanitary Landfill		Farm Avenue	Peabody	2	40044	06/25/20
15	Salem & Beverly Water Supply Board	50	Arlington Avenue	Beverly	2	10070	11/18/20
16	Peabody Monofill Associates		Farm Avenue	Peabody	2	41050	06/22/20
17	Coolidge Avenue WTP	50	Coolidge Avenue	Peabody	2	41042	05/29/20
18	Winona Water Treatment Plant	38	Butternut Avenue	Peabody	2	41031	06/24/20
19	Fresh Advantage	18	Electronics Avenue	Danvers	2	20230	08/28/20
20	Tropical Products, Inc.	220	Highland Avenue	Salem	2	50138	11/04/20
21	DiLuigi Foods	41	Popes Lane	Danvers	2	20240	11/5/20

#### 2.2 Industries Sampled by SESD During 2020

**SESD Sampling Events** 

~-	~	~.	~		~		_
Class	Company Name	City	Start	End	Start	End	Days
1	Axcelis Technologies, Inc.	Beverly	1/28/20	1/30/20	10/13/20	10/15/20	4
2	Communications & Power Industries, Inc.	Beverly	1/21/20	1/23/20	11/23/20	11/25/20	4
2	Coolidge Ave. WTP*	Peabody	7/6/20	7/7/20	10/5/20	10/7/20	3
2	Danvers Water Treatment Plant	Middleton	7/27/20	7/28/20	12/8/20	12/11/20	4
2	Delta Electronics Mfg., Co., Inc.	Beverly	1/21/20	1/23/20	11/23/20	11/25/20	4
2	Excelitas Technologies Corporation	Salem	2/3/20	2/5/20	10/27/20	10/29/20	4
2	Footprint Power Salem Harbor Operations LLC	Salem	7/6/20	7/8/20	11/4/20	11/6/20	4
2	IXYS IC Division	Beverly	1/27/20	1/29/20	10/13/20	10/15/20	4
2	Peabody Monofill Associates	Peabody	3/2/20	3/4/20	9/28/20	9/30/20	4
2	Peabody Sanitary Landfill	Peabody	6/29/20	7/1/20	9/21/20	9/23/20	4
2	Peabody Sanitary Landfill - North Swamp PS	Peabody	6/29/20	7/1/20	921/20	9/23/20	4
2	Rousselot Peabody, Inc.	Peabody	7/13/20	7/17/20	10/19/20	10/23/20	4
2	Salem & Beverly Water Supply Board**	Beverly	7/21/20	7/22/20	10/20/20	10/23/20	3
2	TDF Metal Finishing	Danvers	2/18/20	2/20/20	11/30/20	12/2/20	4
2	Thermal Circuits, Inc.	Salem	3/9/20	3/10/20	10/26/20	10/28/20	4
2	Travel Leather Co., Inc.	Peabody	3/2/20	3/4/20	9/28/20	10/1/20	4
2	Walbar Peabody LLC (1 Fifth St)	Peabody	1/13/20	1/15/20	11/16/20	11/18/20	4
2	Walbar Peabody LLC (8 Fifth St)	Peabody	1/13/20	1/15/20	11/16/20	11/18/20	4
2	Winona WTP	Peabody	6/17/20	6/19/20	9/16/20	9/18/20	4
2	Fresh Advantage Foods, Inc.***	Danvers	6/17/20	6/19/20	9/16/20	9/18/20	3
2	Tropical Products, Inc.	Salem	2/3/20	2/5/20	11/2/20	11/4/20	4
2	DiLuigi Foods	Danvers	2/18/20	2/20/20	11/30/20	12/2/20	4
					Total SIU	Samples	85

<sup>\*</sup> Coolidge Ave. WTP no sample on 7/8/20 due to equipment malfunction.

#### 2.3 Summary of Compliance Schedules (2020)

No Compliance Schedules were issued in 2020.

#### **2.4 pH Monitoring (2020)**

As of December 31, 2020, The District's pH monitoring program has nineteen industries involved. Fourteen (14) of the nineteen (19) industries are required to monitor pH continuously (all are SIU's) and five (5) of the nineteen (19) industries submit monthly pH/flow logs. Each industry that is required to submit a pH strip chart does so on a monthly basis. The data received by the District is reviewed and NOVs are issued if warranted. Generally, the noted excursions are attributable to a malfunction of the monitoring equipment or situations where no flow is occurring. In those circumstances where further investigation shows an actual pH violation, appropriate corrective action is taken in accordance with the Enforcement Response Plan.

<sup>\*\*</sup>Salem & Beverly Water Supply Board plant schedule switched to summer hours no discharge on 7/23/20.

<sup>\*\*\*</sup>Fresh Advantage Foods, Inc. missed sample on 6/18/20 due to equipment malfunction

#### 2.5 Summary of Written Notices of Violation (2020)

Notices of violation (NOVs) are issued to an industry when a limit in the industry's permit is exceeded. Below is a table of the District's subject SIUs, the number of notices of violation issued and the topic of each violation issued. Certain procedural violations, such as submitting a pH chart late or submitting a report late, were handled by a telephone call. All other infractions were documented with written notification to the industry of concern.

Name of Industry	# of Violations	Violation Issued
Walbar Peabody LLC, 1 Fifth Street		(1) Monthly Cu
Walbar Peabody LLC, 8 Fifth Street		·
Excelitas Technologies Corporation		
Thermal Circuits, Inc.		
TDF Metal Finishing Co., Inc.		
Delta Electronics Mfg. Co., Inc.		(1)Daily CN
DiLuigi Foods	1	(1)pH (procedural)
Communications & Power Industries, Inc.	3	(3)pH (procedural), (1)Daily Ni, (1)Monthly Ni
Axcelis Technologies, Inc.	1	(1)pH (procedural)
Travel Leather Co., Inc.	1	(1)pH (procedural), (1)Daily Cr, (1)Monthly Cr
GT Crystal Systems, LLC		
Danvers Water Treatment Plant		
Footprint Power Salem Harbor Development, LP		
IXYS IC Division (fka Clare Inc.)	1	(1)pH (procedural)
Rousselot Peabody, Inc.		(7)Daily TSS
City of Peabody Sanitary Landfill		
Salem & Beverly Water Supply Board	1	(1)pH (procedural)
Peabody Monofill Associates, Inc.	1	(1)pH (procedural)
City of Peabody, Coolidge Avenue WTP		
City of Peabody, Winona WTP		
Fresh Advantage Foods, Inc.		
Tropical Products, Inc.		

# 2.6 Summary of Administrative meetings, Administrative Orders, Criminal or Civil Suits Filed and Penalties Collected (2020)

Two industries were subjected to administrative penalties in 2020. Rousselot Peabody, Inc. was fined \$50,000 for eleven NOV's issued between August 2017 and May 31, 2020. Thermal Circuits, Inc. was fined \$7,775 for twelve NOV's issued between June 2017 and May 2019.

#### **SECTION 3**

#### **SUMMARY OF SIGNIFICANT NON-COMPLIANCE**

Significant noncompliance (SNC) was based on 40 CFR 403.8 (f) (2) (viii). The District evaluated its industries' SNC status quarterly as shown in the following table:

SNC Quarter	Chronic Effluent and TRC Violations 40CFR403.8(f)(2)(vii)(A&B) (six month rolling average)	Reporting Requirements and Other Criteria 40CFR403.8(f)(2)(vii)(C-H)
1st Quarter	October - March	January - March
2nd Quarter	January - June	April - June
3rd Quarter	April - September	July - September
4th Quarter	July - December	October - December

The following is a summary of industries found to be in SNC for CY 2020.

A. Non-compliance with categorical limits

Communications & Power Industries, LLC (Ni monthly TRC)

150 Sohier Road, Beverly MA

Walbar Peabody, LLC (Cu monthly TRC)

1 Fifth Street, Peabody MA

B. Non-compliance with local limits

None

The following three pages represent a public notice of significant noncompliance as was published on February 12, 2021 covering periods October 1, 2019 to March 31, 2020 (One Company); and January 1, 2020 to June 30, 2020 (N/A); and April 1, 2020 to September 30, 2020 (N/A); and July 1, 2020 to December 31, 2020 (One Company).

# SOUTH ESSEX SEWERAGE DISTRICT -----PUBLIC NOTICE----LIST OF VIOLATORS

In accordance with the United States Environmental Protection Agency regulations, 40 CFR 403.8 (f) (2) (viii), the South Essex Sewerage District is required to publish, at minimum, annually a list of all companies that are or have been in significant noncompliance (SNC) with federal, state, or local wastewater discharge pretreatment standards or other pretreatment requirements during the previous calendar year.

Significant noncompliance is a violation meeting one or more of the following numbered criteria:

- 1. Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l);
- 2. Technical review criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6 month period equal or exceed the product of the numeric Pretreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(1) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH);
- 3. Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(1) (daily maximum or long-term average, instantaneous limit, or narrative Standard) that the South Essex Sewerage District determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of District personnel or the general public);
- 4. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the South Essex Sewerage District's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of 40 CFR 403.8 to halt or prevent such a discharge;
- 5. Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;
- 6. Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self- monitoring reports (SMR), and reports on compliance with compliance schedules;
- 7. Failure to accurately report noncompliance;
- 8. Any other violation or group of violations, which may include a violation of Best Management Practices, which the South Essex Sewerage District determines will adversely affect the operation or implementation of the local Pretreatment program.

SNC is evaluated four times each calendar year, as of the end of March, June, September and December, using at that point discharge data and other information for the previous six month period. For each period a description of the violation and corresponding criteria are indicated below.

Period ending March 31, 2020

Communications & Power Industries, LLC	(Ni monthly TRC)	2*
Period ending June 30, 2020		
None		
Period ending September 30, 2020		
None		
Period ending December 31, 2020		
Walbar Peabody, LLC	(Cu monthly TRC)	2*

<sup>\*</sup> Indicates criterion number listed above.

February 12, 2021 David Michelsen, P.E. Executive Director

### SOUTH ESSEX SEWERAGE DISTRICT

SOUTH ESSEX SEWERAGE DISTRICT

——PUBLIC NOTICE——
LIST OF VIOLATORS

In accordance with the United States Environmental Protection Agency regulations, 40 CFR 403.8 (f) (2) (viii), the South Essex Sewerage District is required to publish, at minimum, annually a list of all companies that are or have been in significant noncompliance (SNC) with federal, state, or local wastewater discharge pretreatment standards or other pretreatment requirements during the previous calendar year.

Significant noncompliance is a violation meeting one or more of the following numbered criteria:

1. Chronic violations of wastewater discharge limits, defined here as those in which 66 percent or more of all of the measurements taken for the same pollutant parameter during a 6-month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including instantaneous limits, as defined by 40 CFR 403.3(l);

2. Technical review criteria (TRC) violations, defined here as those in which 33 percent or more of all of the measurements taken for the same pollutant parameter during a 6 month period equal or exceed the product of the numeric Pertreatment Standard or Requirement including instantaneous limits, as defined by 40 CFR 403.3(l) multiplied by the applicable TRC (TRC = 1.4 for BOD, TSS, fats, oil, and grease, and 1.2 for all other pollutants except pH);

3. Any other violation of a Pretreatment Standard or Requirement is a defined by 40 CFR 403.3 (minimal or requirement).

except pH);

3. Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) (daily maximum or long-term average, instantaneous limit, or narrative Standard) that the South Essex Sewerage District determines has caused, alone or in combination with other Discharges, Interference or Pass Through (including endangering the health of District personnel or the general public):

4. Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the South Essex Sewerage District's exercise of its emergency authority under paragraph (f)(1)(vi)(B) of 40 CFR 403.8 to halt or prevent such a discharge, 5. Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance;

order for starting construction, completing construction, or attaining final compliance;

6. Failure to provide, within 45 days after the due date, required reports such as baseline monitoring reports, 90-day compliance reports, periodic self-monitoring reports (SMR), and reports on compliance with compliance schedules;

schedules;
7. Failure to accurately report noncompliance;
8. Any other violation or group of violations, which may include a violation of Best Management Practices, which the South Essex Sewerage District determines will adversely affect the operation or implementation of the local Pretreatment program.

SNC is evaluated four times each calendar year, as of the end of March, June, September and December, using at that point discharge data and other information for the previous six month period. For each period a description of the violation and corresponding criteria are indicated below. Period ending March 31, 2020
Communications & Power Industries, LLC (Ni monthly TRC) 2\*

Period ending June 30, 2020

Period ending September 30, 2020

Period ending December 31, 2020 Walbar Peabody, LLC ,

(Cu monthly TRC)

\* Indicates criterion number listed above.

February 12, 2021 David Michelsen, P.E. Executive Director

SN - 2/12/21

#### SECTION 4 NARRATIVE DESCRIPTION OF PROGRAM EFFECTIVENESS

During the past year, the Monitoring and Enforcement Division has performed all aspects of the approved pretreatment program. In the following paragraphs, the accomplishments of the past year as well as the goals to be achieved for the coming year are summarized.

#### **4.1 Inspections and Permits**

During calendar year 2020, 454 inspections were conducted. Inspections consisted of any of the following varieties and the frequency of each are included below:

Type of Inspection	Frequency
A. Renewal/Other	108
B. pH Spot Checks	323
C. Annual	23

Inspections were performed on an as needed basis when an existing permit was scheduled for renewal. This allowed the District to monitor and maintain accurate records of all industries within its borders.

"Other" inspections were a result of the 2020 Industrial User update effort. Phone books and industrial park reviews were used to compile a list of potential industries to investigate. From this list "cold call" inspections were performed. If in the initial inspection it was determined that process wastewater was generated at the site or that more information was needed, the District requested an application be completed and returned. Once the application was received and reviewed a comprehensive inspection would be executed and the decision whether or not to require a permit was made. In addition, a "cold call" inspection was completed on facilities without permits and not visited in more than four years to keep files current.

Industrial pH spot checks were performed monthly on randomly selected industries. As of December 31, 2020, there were fourteen (14) industries with a continuous pH-monitoring requirement in their permit and five (5) industries that must submit monthly pH/flow logs.

All submitted Self-monitoring reports are scrutinized for completeness and industrial compliance with the District's Sewer Use Regulations. Sampling and testing providers have worked closely with the District to insure complete self-monitoring submittals from the industrial users.

The District continues to permit facilities above and beyond the significant industrial users. As of December 31, 2020, the District had a total of 27 wastewater discharge permits (21 SIU's and 6 General Permits) and maintained active files on 487 locations.

The District continues to record and monitor septage customers, septage haulers and other non-permitted industries within the District, including large quantity food waste generators. This is to ascertain compliance with the District's Sewer Use Regulations.

In accordance with *Title 40 Code of Federal Regulations Part 441.50 Effluent Limitations Guidelines and Standards*, correspondences were mailed to all effected dental dischargers in Beverly, Danvers, Marblehead, Peabody and Salem. A One-Time Compliance Report was required from each dental discharger by October 12, 2020. As of December 31, 2020, 100% of the dental dischargers, identified within the District, have completed and submitted the required One-Time Compliance Report.

#### 4.2 Equipment Purchased and Utilized

All existing equipment has been inspected and maintained on a regular basis. Any piece of equipment needing repair was immediately taken out of service until repairs could be made. Repairs were then made and the equipment was placed on "ready" status. The District has started to replace its flow meters and portable samplers. One new flow meter was purchased in 2020

We continue to sample and test selected collection system locations and industrial wastewater discharges for flashpoint and compliance with the District's Sewer Use Regulations. This endeavor utilized multiple pieces of the District's pretreatment equipment and staff.

#### 4.3 Training, Reference Material and Staffing

During 2020, additional reference materials were purchased or received via the internet, to assist the staff in the performance of their duties. Staff members also attended assorted pretreatment workshops and training sessions. The staff member list for the Monitoring & Enforcement Division is as follows:

Peter Clark Supervisor of Laboratory/Monitoring
 Paris Bruscoe Industrial Pretreatment Inspector

• Richard Tierney Pretreatment Technician

• Pam Geiser Administrative Assistant (Started in April 2020)

The District's laboratory remains certified by the Commonwealth of Massachusetts, license # M-MA154, for total suspended solids, biochemical oxygen demand, pH and fats oils and grease.

#### 4.4 Proposed changes to the program

See section 10 regarding proposed program changes.

### SECTION 5 TESTING OF THE INFLUENT, EFFLUENT AND ADDITIONAL TESTING TO DETECT INTERFERENCE AND PASS-THROUGH

The District performed the following pollutant analytical results and toxicity testing in 2020.

- Influent, effluent and sludge samples were analyzed for metals content quarterly.
- Ammonia, Total Kjeldahl Nitrogen (TKN) and nitrate analyses were performed monthly on the District's influent and final effluent during calendar year 2020.
- Influent and effluent cyanide samples (four grabs) were collected and analyzed.
- Influent and effluent TTO samples were collected and analyzed.
- TCLP testing was performed quarterly on the District's sludge.
- NPDES toxicity testing results.

A summary of the results of these analyses can be found in Attachment A. Septage monitoring was not collected in 2020. The District sampled and analyzed wastewater from Metal Finishers for cyanide to assess compliance with pretreatment standards. The results for the Metal Finishers cyanide sampling and testing revealed no violations.

The District's testing program demonstrated permit compliance with the exception of the following permit violations (most of which were associated with high flow conditions or Enterococci sampling and analysis protocols) that occurred during calendar year 2020. A change in Enterococci sample collection procedure and analytical method was made on October 1, 2019 and has helped improve permit compliance.

Date	Test	Result	Limit
November 23, 2020	Enterococci	430 CFU/100ml	276 Colonies/100ml
November 25, 2020	Total Chlorine Residual	0.34 mg/L	0.24 mg/L
December 28, 2020	Total Chlorine Residual	0.79 mg/L	0.24 mg/L

### <u>SECTIONS 6, 7, 8, & 9 DESCRIPTION OF INTERFERENCE AND PASS-THROUGH INFORMATION</u>

These sections refer to the requirements set forth in the District's NPDES permit. During calendar year 2020, the District did not experience any identifiable interference or pass through occurrences. Therefore, no additional follow up investigations, monitoring, sewer inspections, evaluations or regulatory actions were performed with respect to interference and pass-through occurrences.

#### **SECTION 10**

#### STATUS OF LOCAL LIMITS

The date of the latest adoption of Local Limits is January 2005. The District received a new NPDES Permit (MA0100501), issued on May 6, 2016. The new Permit went into effect on August 1, 2016.

The District hired Hoyle Tanner Associates to evaluate the current IPP for potential updates. On November 23, 2016, the District submitted to the EPA's Regional Pretreatment Coordinator a "Reassessment of the Technically Based Local Limits (TBLL)" as required in Part I, Paragraph B.1 of the District's above referenced NPDES Permit.

The District has developed proposed revisions to the District's Sewer Use Regulations (SUR) to comply with the requirements of the EPA's 2005 Streamlining Rule, as required in Part I Paragraph B.7 of the new Permit. A submittal of the proposed changes to the District's SUR was submitted by January 30, 2017, as required in the EPA's letter to the District on October 6, 2016.

Hoyle Tanner Associates finalized a review and list of proposed Pretreatment Program changes as required in Part I, Paragraph B.6 of the above referenced NPDES Permit. This was submitted by January 30, 2017 as required by the Permit.

In August 2018 a Sampling and Analysis Plan for the reevaluation of the District's Local Limits was developed by Hoyle Tanner Associates and submitted to the EPA for approval. The Plan was approved by the EPA on August 29, 2018. In September 2018, Eastern Analytical, Inc. was hired to perform a week long sampling event at the plant and in the collection system. The data gathered will be utilized to reevaluate the District's Maximum Allowable Headworks Loading (MAHL) and Local Limits.

#### **SUMMARY**

The EPA Region 1 Annual Pretreatment Report Summary Sheet for 2020 is included as Attachment B.

### **ATTACHMENT A**

### **Section Five (5) Supporting Documentation**

- 1. Metals Testing
- 2. Ammonia, TKN, Nitrate and CN Testing
- 3. TCLP Sludge Testing
- 4. Toxicity Testing

1	1	`
		١
١.	1	•

			50	uth Essex Se	w erage Distri	ct			
				Metals Ana	alysis 2020				
INFLUENT									
Composite Analysis					2020(1)	Average(1)	Max(1,2)	Percent of	
Date	1/7/2020	4/1/2020	7/14/2020	10/7/2020	Max		Allow able	MAHL	
Total Metals (mg/l)	mg/L	mg/L	mg/L	mg/L	HL(lbs)	HL(lbs)	MAHL(lbs)	(Ave/Allowable)	
Arsenic (As)	<0.004		<0.005		0.00	N/A	5.64		
Cadmium (Cd)	<0.002	<0.0006	<0.002	<0.002	0.00	N/A	1.88	-	
Chromium (Cr)	0.011	0.002	0.005	0.01	2.99	1.41	50.10	2.8%	
Copper (Cu)	0.064	0.033	0.08	0.075	17.41	12.11	48.20	25.1%	
Cyanide (CN)	<0.01		<0.01	<0.01	0.00	N/A	14.90		
Lead (Pb)	0.004		0.004		1.09	0.85	22.90	3.7%	
Mercury (Hg)	<0.0002		<0.0002		0.00	N/A	0.50		
Molybdenum (Mo)	<0.005		<0.005		0.00	N/A	-		
Nickel (Ni)	<0.002	0.003	0.009	0.003	1.36	0.86	20.30	4.2%	
Selenium (Se)	<0.008		<0.008	***************************************	0.00	N/A	7.51	***************************************	
Silver (Ag)	<0.0025		<0.002		0.00	N/A	20.60		
Zinc (Zn)	0.097	0.087	0.156	0.121	26.39	22.38	165.00	13.6%	
Note: 1) non-detect v							. 55.00	/ 0	
2) MAHL - sour									
EFFLUENT	oo dala 1101	5255 22 2	20 V GIOPITIOITI	(2000)					
LILOUNI		N /1.2. □ □	esting			Toxicity	testing		
Composite Analysis	1	IVICIE	caung			TOXICITY	Coung		
	1/7/2020	4/4/2020	7/1/1/2020	10/7/2020	2/2/2020	4/E/2020	6/14/2020	9/2/2020	
Date Total Motals (mg/l)		4/1/2020	7/14/2020	10/7/2020		4/5/2020	6/14/2020	8/2/2020	
Total Metals (mg/l)	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
Aluminum (Al)		~~~~	0.004		0.088	0.075	0.066	0.057	
Arsenic (As)	<0.004		<0.004	<0.004					
Cadmium (Cd)	<0.002	<0.0006	<0.001	<0.001	<0.0003	<0.0003	<0.0003	<0.0005	
Chromium (Cr)	<0.002	<0.0006	<0.001	0.001	<0.001	<0.001	<0.001	<0.002	
Copper (Cu)	<0.005	0.005	0.018	0.017	0.0072	0.006	0.0081	0.0049	
Cyanide (CN)	<0.01		<0.01	<0.01					
Lead (Pb)	<0.003		<0.001	<0.001	0.0003	0.0004	0.0003	<0.0005	
Mercury (Hg)	<0.0002			<0.0002					
Molybdenum (Mo)	<0.005		0.002	0.002					
Nickel (Ni)	<0.002	0.002	0.005	<.001	0.0028	0.0019	0.0021	0.0027	
Selenium (Se)	<0.008		<0.005	<0.005					
Silver (Ag)	<0.0025		<0.001	<0.001					
Zinc (Zn)	0.018	0.024	0.016	0.022	0.035	0.025	0.017	0.015	
Total				CI IN AN A	ARY OF EFFLI	IENT METALS			
	Numberet	Niumbar	Dotostad					A ovito	Λ α
Metals	Number of	Number	Detected	Detected	Detected	Chronic	Chronic	Acute	Acute
(mg/l)	Analysis	Detected	Minimum	Maximum	Average	Criteria	Criteria	Criteria	Criteria
				n			* 18.6:1 dil.		* 18.6:1 di
A 1			mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Aluminum (Al)	4	4	0.057	0.088	0.0715	0.000	0.000	0.000	4 000
Arsenic (As)	3	0	N/A	N/A		0.036	0.670	0.069	1.283
Cadmium (Cd)	8	0	N/A	N/A		0.0093	0.173	0.033	0.614
Chromium (Cr)	8	11	0.001	0.001	0.0010				
Copper (Cu)	8	7	0.0049	0.018	0.0095	0.0031	0.058	0.0048	0.089
Cyanide (CN)	3	0	N/A	N/A		0.0010	0.019	0.0010	0.019
Lead (Pb)	7	3	0.0003	0.0004	0.0003	0.0056	0.104	0.14	2.604
Mercury (Hg)	2	0	N/A	N/A		0.00094	0.017	0.0018	0.033
Molybdenum (Mo)	3	2	0.002	0.002	0.0020				
Nickel (Ni)	8	6	0.0019	0.005	0.0028	0.0082	0.153	0.074	1.376
Selenium (Se)	3	0	N/A	N/A		0.071	1.321	0.29	5.394
Silver (Ag)	3	0	N/A	N/A			***************************************	0.0019	0.035
Zinc (Zn)	8	8	0.015	0.035	0.0215	0.081	1.507	0.09	1.674

(2)

### South Essex Sewerage District

### Influent / Effluent Ammonia, CN, TKN and Nitrate Results

Calendar year 2020

		INFLUEN	T			Е	FFLUEN	T	
	Ammonia	TKN	Nitrate	Nitrate/Nitrite		Ammonia	TKN	Nitrate	Nitrate/Nitrite
Date	Result	Result	Result	Result	Date	Result	Result	Result	Result
	mg/l	mg/l	mg/l	mg/l		mg/l	mg/l	mg/l	mg/l
1/7/2020	14.9	29.5	<0.4	0.4	1/7/2020		15.8	0.76	1.25
2/12/2020	18.3	28.8	0.72	1.16	2/12/2020	16.8	21.0	0.98	1.44
3/3/2020	20.9	34.2	<0.4	<0.5	3/3/2020	18.3	23.4	0.74	0.74
4/1/2020	15.6	24.2	0.82	0.82	4/1/2020	15.3	16.1	0.97	1.46
5/6/2020	14.3	25.7	0.71	1.39	5/6/2020	15.1	16.6	1.00	1.62
6/10/2020	25.0	37.1	<0.4	<0.5	6/10/2020	25.5	27.6	<0.4	<0.5
7/14/2020	29.8	43.4	<0.4	<0.5	7/14/2020	34.3	30.7	0.48	0.48
8/13/2020	32.7	49.0	<0.4	<0.5	8/13/2020	29.2	33.2	0.51	1.29
9/9/2020	43.2	56.7	<0.4	<0.5	9/9/2020	40.4	42.4	<0.4	0.84
10/7/2020	38.3	54.0	<0.4	<0.5	10/7/2020	32.9	40.6	<0.4	<0.5
11/3/2020	21.4	33.5	<0.4	<0.5	11/3/2020	17.2	26.8	<0.4	0.47
12/14/2020	15.5	29.8	<0.4	0.42	12/14/2020	13.9	16.9	<0.4	0.36
Average	24.2	37.2	0.75	0.84	Average	22.7	25.9	0.78	1.00
Maximum	43.2	56.7	0.82	1.39	Maximum	40.4	42.4	1.00	1.62
Minimum	14.3	24.2	<0.4	<0.5	Minimum	13.9	15.8	<0.4	<0.5
INFLUENT - gra									
Date	1/7/2020	7/14/2020	10/7/2020	12/14/2020					
Time	8:05AM	7:10AM	1:20PM	8:00AM					
CN (mg/l)	<0.01	<0.01	<0.01	<0.01					
EFFLUENT - gr	ab								
Date	1/7/2020	7/14/2020	10/7/2020	12/14/2020					
Time	8:20AM	7:15AM	1:30PM	8:30AM					
CN (mg/l)	<0.01	<0.01	<0.01	<0.01					

(3)

(3)		SOUT	TH ESSEX	SEWERAG	E DISTRIC	T		
				e Testing I				
Parameter	Units	1/30/2020	4/22/2020	5/6/2020	6/4/2020	7/30/2020	10/30/2020	12/27/2020
Solids Total	Percent	23.0	3.9	17.9	18.8	17.3	23.5	24.1
Solids Total Volatile	Percent	87.7	85.9		86	85.7	88.2	86
Total Carbon (est)	Percent	48.7	47.7			47.6	49	
Solids Total Fixed	Percent	12.3	14.1		14	14.3	11.8	14
Chloride	mg/kg	1500	16000			350	2300	
Nitrate/Nitrite-N	mg/kg	61	90			<6	<5	***************************************
Ammonia-N	mg/kg	3400	8900			3600	2200	
TKN	mg/kg	59000	63000			59000	56000	
Total Nitrogen	mg/kg	59061	63090			59000	56000	
pH	SU	5.64	5.7		5.8	5.53	5.81	***************************************
Paint Filter (Free Liqui	None	Absent	Present	Absent	Absent	Absent	Absent	Absent
Aluminum (AI)	mg/kg	12000	9600		15500	15000	8000	8350
Arsenic (As)	mg/kg	3	3.3		3.22	4.3	3.9	2.46
Barium (Ba)	mg/kg							
Berylium (Be)	mg/kg	0.12	0.18		<0.93	<0.1	<0.1	<0.79
Calcium (Ca)	mg/kg	15000	18000			14000	17000	
Cadmium (Cd)	mg/kg	1.1	1.1		1.65	0.7	0.77	1.63
Chromium (Cr)	mg/kg	85	28		24.6	43	28	28
Copper (Cu)	mg/kg	230	210		298	360	220	210
Iron (Fe)	mg/kg	6000	5800		7480	7100	6000	6740
Lead (Pb)	mg/kg	15	13		14.3	18	}~~~~~~~~~~	16.2
Magnesium (Mg)	mg/kg	1800	2400			1800	1600	
Manganese (Mn)	mg/kg	100	110			120	110	
Mercury (Hg)	mg/kg	0.32	0.16		2.02	0.38	0.36	<0.243
Molybdenum (Mo)	mg/kg	3.5	3.1			6.7	4.2	
Nickel (Ni)	mg/kg	6.9	6.4		7.33	8.9	7.5	8.94
Phosphorus (P)	mg/kg	16000	15000		16900	16000	14000	14300
Potassium (K)	mg/kg	2300	4500			2200	2300	
Selenium (Se)	mg/kg	2.5	2.4		<1.86	2.3	1.9	<1.58
Sodium (Na)	mg/kg	1500	6400			2200	1400	
Zinc (Zn)	mg/kg	360	300		546	470	430	391
Silver (TCLP)	mg/L			<0.1	<0.025		<0.1	<0.025
Arsenic (TCLP)	mg/L			<0.5	<0.025		<0.5	<0.025
Barium (TCLP)	mg/L			<0.5	0.083		<0.5	0.042
Cadmium (TCLP)	mg/L			<0.1	<0.025		<0.1	<0.042
Chromium (TCLP)	mg/L			<0.1	<0.025		<0.1	<0.025
Mercury (TCLP)	mg/L			<0.01	<0.023		<0.01	<0.023
Lead (TCLP)	mg/L			<0.5	<0.025	***************************************	<0.5	<0.025
Selenium (TCLP)	mg/L			<0.1	<0.05		<0.1	<0.05

#### SESD 2020 Toxicity Testing Results

The following summarizes the results of acute and chronic exposure bioassays performed in support of the NPDES biomonitoring requirements of the South Essex Sewerage District, Salem Massachusetts. The new NPDES Permit signed May 5, 2016 requires both Acute and Chronic evaluations. The 48 hour Acute definitive assays were conducted using marine species, *Americamysis bahia* and *Menidia beryllina*. The 7 day Chronic test used the marine species Menidia beryllina and the 60 Minute Chronic test used the marine species Arbacia punctulata.

Study Number 32697 Sample Date: Februar Acute Toxicity Evaluation	ry 2020			Permit	Pass
riodio Toxiony Evaluation			A-		1 400
Species	Exposure	LC-50	NOEC	Limit (LC-50)	Yes/No
Americamysis bahia	48 Hour	>100%	NC	≥100%	Yes
Menidia beryllina	48 Hour	>100%	NC	≥100%	Yes
Chronic Toxicity					
Evaluation				Permit Limit	Pass
		C-			
Species	Exposure	NOEC	IC-25	(C-NOEC)	Yes/No
Menidia beryllina	7 Days	100%	NC	Report	NA
Arbacia punctulata	60 Minutes	100%	>100%	Report	NA
Study Number 33970					
Sample Date: April 20	20				
Acute Toxicity Evaluation	.20			Permit	Pass
reate realisity Evaluation			Α-		1 400
Species	Exposure	LC-50	NOEC	Limit (LC-50)	Yes/No
Species Americamysis bahia	<b>Exposure</b> 48 Hour	<b>LC-50</b> >100%		Limit (LC-50) ≥100%	Yes/No Yes
			NOEC	•	
Americamysis bahia Menidia beryllina	48 Hour	>100%	NOEC NC	≥100%	Yes
Americamysis bahia Menidia beryllina Chronic Toxicity	48 Hour	>100%	NOEC NC	≥100% ≥100%	Yes Yes
Americamysis bahia Menidia beryllina	48 Hour	>100% >100%	NOEC NC	≥100%	Yes
Americamysis bahia Menidia beryllina Chronic Toxicity	48 Hour	>100%	NOEC NC	≥100% ≥100%	Yes Yes
Americamysis bahia Menidia beryllina Chronic Toxicity Evaluation	48 Hour 48 Hour	>100% >100%	NOEC NC NC	≥100% ≥100% Permit Limit	Yes Yes Pass
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species	48 Hour 48 Hour Exposure	>100% >100% C- NOEC	NOEC NC NC	≥100% ≥100% Permit Limit (C-NOEC)	Yes Yes Pass Yes/No
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species Menidia beryllina	48 Hour 48 Hour Exposure 7 Days	>100% >100% <b>C-</b> <b>NOEC</b> 100%	NOEC NC NC IC-25 NC	≥100% ≥100% Permit Limit (C-NOEC) Report	Yes Yes Pass Yes/No
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species  Menidia beryllina Arbacia punctulata	48 Hour 48 Hour Exposure 7 Days	>100% >100% <b>C-</b> <b>NOEC</b> 100%	NOEC NC NC IC-25 NC	≥100% ≥100% Permit Limit (C-NOEC) Report	Yes Yes Pass Yes/No
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species Menidia beryllina Arbacia punctulata  Study Number 34158	48 Hour 48 Hour Exposure 7 Days 60 Minutes	>100% >100% <b>C-</b> <b>NOEC</b> 100%	NOEC NC NC IC-25 NC	≥100% ≥100% Permit Limit (C-NOEC) Report	Yes Yes Pass Yes/No
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species Menidia beryllina Arbacia punctulata  Study Number 34158 Sample Date: June 20	48 Hour 48 Hour Exposure 7 Days 60 Minutes	>100% >100% <b>C-</b> <b>NOEC</b> 100%	NOEC NC NC IC-25 NC	≥100% ≥100%  Permit Limit (C-NOEC)  Report Report	Yes Yes Pass Yes/No NA NA
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species Menidia beryllina Arbacia punctulata  Study Number 34158	48 Hour 48 Hour Exposure 7 Days 60 Minutes	>100% >100% <b>C-</b> <b>NOEC</b> 100%	NOEC NC NC IC-25 NC >100%	≥100% ≥100% Permit Limit (C-NOEC) Report	Yes Yes Pass Yes/No
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species Menidia beryllina Arbacia punctulata  Study Number 34158 Sample Date: June 20	48 Hour 48 Hour Exposure 7 Days 60 Minutes	>100% >100% <b>C-</b> <b>NOEC</b> 100%	NOEC NC NC IC-25 NC	≥100% ≥100%  Permit Limit (C-NOEC)  Report Report  Permit	Yes Yes Pass Yes/No NA NA
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species  Menidia beryllina Arbacia punctulata  Study Number 34158 Sample Date: June 20 Acute Toxicity Evaluation	48 Hour 48 Hour Exposure 7 Days 60 Minutes	>100% >100% C- NOEC 100% 100%	NOEC NC NC IC-25 NC >100%	≥100% ≥100%  Permit Limit (C-NOEC)  Report Report	Yes Yes Pass Yes/No NA NA
Americamysis bahia Menidia beryllina  Chronic Toxicity Evaluation  Species  Menidia beryllina Arbacia punctulata  Study Number 34158 Sample Date: June 20 Acute Toxicity Evaluation  Species	48 Hour 48 Hour  Exposure 7 Days 60 Minutes	>100% >100% C- NOEC 100% 100%	NOEC NC NC IC-25 NC >100%  A- NOEC	≥100% ≥100%  Permit Limit (C-NOEC) Report Report Permit Limit (LC-50)	Yes Yes Pass Yes/No NA NA Pass Yes/No

Chronic Toxicity				Danneit Lineit	Dana
Evaluation		C-		Permit Limit	Pass
Species	Exposure	NOEC	IC-25	(C-NOEC)	Yes/No
Menidia beryllina	7 Days	25%	54.3%	Report	NA
Arbacia punctulata	60 Minutes	25%	NC	Report	NA
Study Number 34308					
Sample Date: August 2	020				
Acute Toxicity Evaluation	020			Permit	Pass
			A-		
Species	Exposure	LC-50	NOEC	Limit (LC-50)	Yes/No
Americamysis bahia	48 Hour	>100%	NC	≥100%	Yes
Menidia beryllina	48 Hour	>100%	NC	≥100%	Yes
Observice Tassicites					
Chronic Toxicity Evaluation				Permit Limit	Pass
Evaldation		C-		i cimit Limit	1 433
Species	Exposure	NOEC	IC-25	(C-NOEC)	Yes/No
Menidia beryllina	7 Days	100%	NC	Report	NA
Arbacia punctulata	60 Minutes	100%	NC	Report	NA

NA = Not Applicable NC = Not Calculated

#### **ATTACHMENT B**

# **EPA Region 1 Annual Pretreatment Report Summary Sheet** (2020)

POTW Name:	South Essex Sewerage District
NPDES Permit #:	MA0100501
Pretreatment Report Period Start Date:	January 1, 2020
Pretreatment Report Period End Date:	December 31, 2020
# of Significant Industrial Users (SIUs):	21
# of SIUs Without Control Mechanisms:	0
# of SIUs not inspected:	0
# of SIU's not sampled:	0
# of SIUs in Significant Noncompliance	
(SNC) with Pretreatment Standards:	2
# of SIUs in SNC with Reporting	
Requirements:	0
# of SIUs in SNC with Pretreatment	0
Compliance Schedule:	
# of SIUs in SNC Published in Newspaper:	2
# of SIUs with Compliance Schedules:	0
# of Violation Notices Issued to SIUs:	12
# of Administrative Orders Issued to SIUs:	2
# of Civil Suits Filed against SIUs:	0
# of Criminal Suits Filed Against SIUs:	0
# of Categorical Industrial Users (CIUs):	14
# of CIUs in SNC:	2

#### **Penalties**

Total Dollar Amount of Penalties Collected: \$57,775 # of IUs from which Penalties have been collected: 2

**Local Limits** 

Date of Most Recent Technical Evaluation of Local Limits:

November, 2003

Date of Most Recent Adoption of Technically Based Local Limits:

January, 2005

Pollutants	Technically Based Local Limits (mg/L)			MAHLs (lbs/day)	
	Non-contributory	Contributory	Categorical		
As				5.64	
Cd	0.02	0.36	0.11 - 0.69	1.88	
Cr	0.25	4	2.27 – 19	50.1	
Cu	0.4	2.7	2.77 - 3.38	48.2	
CN				14.9	
Pb	0.4	0.4	0.57 - 0.69	22.9	
Hg					
Ni	0.1	2.5	3.26 - 3.98	20.3	
Ag				20.6	
Zn	2.6	2.6	2.14 - 2.61	165	
BOD	**	**	**	46,100	
TSS	**	**	**	47,400	
FOG	300	300	300		

<sup>\*\*</sup> Mass based limits that vary with the size of the discharge; the concentration limit is >2,400 mg/L and "X" lbs per day and "Y" annual pound limit.